Serial Number: 09/490,377

IN THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of claims:

1.   (Amended)   1.   A computer implemented method of asynchronously notifying an application client of an event of interest within a database, comprising the steps of:

receiving a subscription to an event name from a logical agent, the event name corresponding to the event of interest **within the database**;

receiving a registration from the application client, the registration including delivery information indicating at least where and how a notification concerning the event is to be delivered;

detecting an occurrence of the event within the database;

publishing the notification to a data structure referenced by the event name upon detecting the occurrence of the event;

retrieving the delivery information and formatting the published notification according to the retrieved delivery information, and

asynchronously delivering the formatted notification to the application client over a network.

2.   (Original)   The computer implemented method of Claim 1, wherein the detecting step is carried out by a trigger within the database, the trigger firing upon the occurrence of the event.

3.   **(Original)**   The computer implemented method of Claim 1, wherein the delivery information includes an identification of a communication protocol according to which the formatted notification is to be sent.

4.   **(Original)**   The computer implemented method of Claim 1, wherein the subscription includes a rule that must be satisfied for the notification to be published.

5.   **(Original)**   The computer implemented method of Claim 4, wherein the rule includes database access language statements.

6.   **(Original)**   The computer implemented method of Claim 1, wherein the data structure includes a queue, the queue being stored as a table in the database.

7.   **(Original)**   The computer implemented method of Claim 1, wherein the retrieving step is carried out by an event monitor, the event monitor communicating with the database through a shared memory space.

8.   **(Original)**   The computer implemented method of Claim 1, wherein the delivery information includes indicia of a quality of service specified by the application client, the quality of service indicia indicating whether the notification must be delivered to the application client.

9.   **(Original)**   The computer implemented method of Claim 8, wherein a temporarily undeliverable notification may be dropped if the indicia indicates that an unreliable quality of service is specified and wherein the temporarily undeliverable notification must be stored if the indicia indicates that a reliable quality of service is specified.

10.   **(Original)**   The computer implemented method of Claim 9, wherein the data structure includes a persistent queue when the indicia indicates that a reliable quality of service is

specified, the persistent queue persisting beyond an instance of the database and wherein the data structure includes a non-persistent queue when the indicia indicates that an unreliable quality of service is specified.

11.   **(Original)**   The computer implemented method of Claim 1, wherein the formatting step formats the notification according to a protocol selected from a group including iiop, http, smtp, ftp, net8 or OFX.

12.   **(Original)**   The computer implemented method of Claim 1, wherein the application client is remote from the database and separated therefrom by a network, and wherein the delivering step delivers the formatted notification to the remote application client over the network.

13.   **(Original)**   The computer implemented method of Claim 12, wherein the network includes at least one the Internet, a private network, a public network and a hybrid network.

14.   **(Original)**   The computer implemented method of Claim 1, wherein the event of interest includes one of a data event and a system event, the data event signaling a change of interest to the application client in a data resident in the database and the system event signaling a change of interest to the application client within the computerized system storing the database.

15.   **(Amended)**   A machine-readable medium having data stored thereon representing sequences of instructions which, when executed by a computer, causes said computer to ~~perform~~ <u>asynchronously notify an application client of an event of interest within a database by performing</u> the steps of:

receiving a subscription to an event name from a logical agent, the event name corresponding to the event of interest **within the database**;

receiving a registration from the application client, the registration including delivery information indicating at least where and how a notification concerning the event is to be delivered;

detecting an occurrence of the event within the database;

publishing the notification to a data structure referenced by the event name upon detecting the occurrence of the event;

retrieving the delivery information and formatting the published notification according to the retrieved delivery information, and

asynchronously delivering the formatted notification to the application client over a network.

16.   (Original)   The machine-readable medium of Claim 15, wherein the detecting step is carried out by a trigger within the database, the trigger firing upon the occurrence of the event.

17.   (Original)   The machine-readable medium of Claim 15, wherein the delivery information includes an identification of a communication protocol according to which the formatted notification is to be sent.

18.   (Original)   The machine-readable medium of Claim 15, wherein the subscription includes a rule that must be satisfied for the notification to be published.

19.   (Original)   The machine-readable medium of Claim 18, wherein the rule includes database access language statements.

20.   **(Original)**   The machine-readable medium of Claim 15, wherein the data structure includes a queue, the queue being stored as a table in the database.

21.   **(Original)**   The machine-readable medium of Claim 15, wherein the retrieving step is carried out by an event monitor, the event monitor communicating with the database through a shared memory space.

22   **(Original)**   The machine-readable medium of Claim 15, wherein the delivery information includes indicia of a quality of service specified by the application client, the quality of service indicia indicating whether the notification must be delivered to the application client.

23.   **(Original)**   The machine-readable medium of Claim 22, wherein a temporarily undeliverable notification may be dropped if the indicia indicates that an unreliable quality of service is specified and wherein the temporarily undeliverable notification must be stored if the indicia indicates that a reliable quality of service is specified.

24.   **(Original)**   The machine-readable medium of Claim 23, wherein the data structure includes a persistent queue when the indicia indicates that a reliable quality of service is specified, the persistent queue persisting beyond an instance of the database and wherein the data structure includes a non-persistent queue when the indicia indicates that an unreliable quality of service is specified.

25.   **(Original)**   The machine-readable medium of Claim 15, wherein the formatting step formats the notification according to a protocol selected from a group including iiop, http, smtp, ftp, Net8 or OFX.

26.   **(Original)**   The machine-readable medium of Claim 15, wherein the application client is remote from the database and separated therefrom by a network, and wherein the delivering step delivers the formatted notification to the remote application client over the network.

27.   **(Original)** .   The machine-readable medium of Claim 26, wherein the network includes at least one the Internet, a private network, a public network and a hybrid network.

28.   **(Original)**   The machine-readable medium of Claim 15, wherein the event of interest includes one of a data event and a system event, the data event signaling a change of interest to the application client in a data resident in the database and the system event signaling a change of interest to the application client within the computerized system storing the database.

29.   **(Amended)**   A computer system for asynchronously notifying an application client of an event of interest within a database, said computer system comprising:

at least one processor;

at least one data storage device;

a plurality of processes spawned by said at least one processor, the processes including processing logic for:

receiving a subscription to an event name from a logical agent, the event name corresponding to the event of interest **within the database**;

receiving a registration from the application client, the registration including delivery information indicating at least where and how a notification concerning the event is to be delivered;

detecting an occurrence of the event within the database;

publishing the notification to a data structure referenced by the event name upon detecting the occurrence of the event;

retrieving the delivery information and formatting the published notification according to the retrieved delivery information, and

asynchronously delivering the formatted notification to the application client over a network.

30.   (Original)   The computer system of Claim 29, wherein the detecting step is carried out by a trigger within the database, the trigger firing upon the occurrence of the event.

31.   (Original)   The computer system of Claim 29, wherein the subscription includes an identification of a communication protocol according to which the formatted notification is to be sent.

32.   (Original)   The computer system of Claim 29, wherein the delivery information includes a rule that must be satisfied for the notification to be published.

33.   (Original)   The computer system of Claim 32, wherein the rule includes database access language statements.

34.   (Original)   The computer system of Claim 29, wherein the data structure includes a queue, the queue being stored as a table in the database.

35.   (Original)   The computer system of Claim 29, wherein the retrieving step is carried out by an event monitor, the event monitor communicating with the database through a shared memory space.

36. **(Original)** The computer system of Claim 29, wherein the delivery information includes indicia of a quality of service specified by the application client, the quality of service indicia indicating whether the notification must be delivered to the application client.

37. **(Original)** The computer system of Claim 36, wherein a temporarily undeliverable notification may be dropped if the indicia indicates that an unreliable quality of service is specified and wherein the temporarily undeliverable notification must be stored if the indicia indicates that a reliable quality of service is specified.

38. **(Original)** The computer system of Claim 37, wherein the data structure includes a persistent queue when the indicia indicates that a reliable quality of service is specified, the persistent queue persisting beyond an instance of the database and wherein the data structure includes a non-persistent queue when the indicia indicates that an unreliable quality of service is specified.

39. **(Original)** The computer system of Claim 29, wherein the formatting step formats the notification according to a protocol selected from a group including iiop, http, smtp, ftp, Net8 or OFX.

40. **(Original)** The computer system of Claim 29, wherein the application client is remote from the database and separated therefrom by a network, and wherein the delivering step delivers the formatted notification to the remote application client over the network.

41. **(Original)** The computer system of Claim 40, wherein the network includes at least one the Internet, a private network, a public network and a hybrid network.

Serial Number: 09/490,377

42. **(Original)** The computer system of Claim 29, wherein the event of interest includes one of a data event and a system event, the data event signaling a change of interest to the application client in a data resident in the database and the system event signaling a change of interest to the application client within the computerized system storing the database.